REMARKS

Applicants have thoroughly considered the Examiner's remarks in the November 4, 2008 Office action and have amended the application to more clearly set forth aspects of the invention. Claims 1–4, 6–15, and 17–19 are presented in the application for further examination. Claims 1–4, 6–15, and 17–19 have been amended by this Amendment A. Claims 5 and 16 have been canceled by this Amendment A. Reconsideration of the application claims as amended and in view of the following remarks is respectfully requested.

As a preliminary matter, Applicants respectfully request that the Examiner clarify the rejections presented in the November 4, 2008 Office action and provide an explanation designating the particular passages in the cited references relied upon. As indicated in 37 C.F.R. 1.104(c)(2):

> In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is **complex** or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. **The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified**.

Additionally, the Manual of Patent Examining Procedures, § 707.07(d), "[w]here a claim is refused for any reason relating to the merits thereof it should be 'rejected' and the ground of rejection fully and clearly stated..." The Office action at page 3 broadly indicates that claims 1–19 are fully anticipated by Bailly (in Figs. 1 and 4 and the corresponding disclosures) and Takehara (in Figs. 1 and 8 and the corresponding disclosure). The figures and disclosures both cover complex circuitry and it is not immediately clear to the Applicants which portions/sections of the cited references the Examiner believes anticipates the invention as claimed.

Specification

The Examiner states that the abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art. Moreover, the Examiner states that the language in the Specification should be clear and concise, should not repeat information given in the title, and should avoid using phrases which can be implied. Applicants have amended the Abstract in accordance with Examiner's instructions.

Claim Rejections under 35 U.S.C. § 102

Claims 1–19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by EP 0936845 A1 (hereinafter "Bailly") and EP 0735658 A2 (hereinafter "Takehara"). A claim is anticipated only if each and every element as set forth in the claim is disclosed, either expressly or inherently in a single prior art reference. M P.E.P. § 2131. (*See also Schering Corp. v. Geneva Pharmaceuticals*, 339 F.3d 1373, 1379 (Fed. Cir. 2003) (citing *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987))). Applicants respectfully submit that each and every element as set forth in the recited claims is not found, either expressly or inherently, in either Bailly or Takehara. Therefore, neither Bailly nor Takahara anticipates the claims.

Amended independent claim 1 of the present application recites, among other things, a converter circuit comprising:

> a switching transistor; and
> a drive circuit for driving the switching transistor which is designed to switch the switching transistor in response to a voltage or current value, wherein the drive circuit comprises two series-connected threshold value components which respond to a respective input signal as a function of a threshold value with an output signal transition, in that an input of a first threshold value component is connected such that it can detect the voltage or current value from the output of the switching transistor, and the output of the first threshold value component drives an input of a second threshold value component, and the output of the second threshold value component drives the control electrode of the switching transistor; and
> wherein the converter circuit comprises a single-feedback system via the threshold value components

As recited in claim 1, the drive circuit is characterized by two series-connected components referred to as threshold value components. These threshold value components each respond to an input signal as a function of a threshold value. In one embodiment, the threshold value represents a relatively abrupt output signal transition. (Specification, [0007]). In this manner, it is possible to manage the drive circuit with a single integrated circuit without having to use very specific and correspondingly expensive special types of management circuitry. (Specification, [0008]). In addition to the economic aspects, a drive circuit comprising two series-connected threshold value components allows for the addition of signal propagation times through the components and, as a result, a desired time delay for driving the switching transistor can be

achieved. (Specification, [0009]). In the configuration described, the path via the two threshold value components forms a single feedback connection between the switching transistor (whose current or voltage value is tapped off) and its control electrode. (Specification, [0012]). As indicated in the present Specification at paragraph [0012]:

> The additional complexity which would become necessary, for example, in the case of a design having an oscillator, whose switching times can be controlled externally, is thus no longer required, and, in particular, it is possible to manage with only two threshold value components.

Bailly describes its invention as providing a seed and supply of a fluorescent tube, with a resonant tube connected to the system with a first resonant frequency when the tube is initiated and at least a second resonant frequency and a third resonant frequency when the tube is not initiated. In Bailly, the third resonant frequency is higher than the first and second resonant frequencies and a switch that supplies power is alternately turned off and on in response to the frequencies. (Bailly, [0009] and [0018). When the tube is not started, the network in Fig. 1 has two main circuits - a first resonant circuit with a first resonant frequency made up of inductors L1 and L2 in series with the capacitor C1 and a second resonant circuit with a second resonant frequency made up of the inductor L1 in series with the capacitors C1 and C2. (Bailly, Fig. 1 and [0022]). The switch SW is switched on and off by the integrated circuit 10, where the Q output is triggered by the CLK input driven by comparator 16 and RESET input driven by comparator 12. (Bailly, Fig. 1 and [0026]). Bailly indicates that this allows its invention to automatically adapt to the highest resonant frequency in the system and operate the switch in response to that frequency. (Bailly, [0026] and [0040]).

But Bailly fails to disclose each and every element of Applicants' invention as recited in amended independent claim 1. In particular, aspects of the invention relate to a drive circuit comprising a **single-feedback circuit** via the threshold value components. The drive circuit of claim 1 comprises, among other things:

> **two series-connected threshold value components** which respond to a respective input signal as a function of a threshold value with an output signal transition, **in that an input of a first threshold value component is connected such that it can detect the voltage or current value from the output of the switching transistor, and the output of the first threshold value component drives an input of a second threshold value**

> **component, and the output of the second threshold value component drives the control electrode of the switching transistor**[.]

In contrast, Bailly describes its switching mechanism as dependent upon an integrated circuit with comparators connected to the CLK and RESET inputs of an integrated circuit, designed to respond to the highest resonant frequency detected in its system, which does not describe a **single-feedback circuit** as recited in claim 1. As such, Bailly does not anticipate amended independent claim 1.

Similarly, the Takehara invention provides power switching through a complex network of circuits, as demonstrated in Figs. 1 and 8 (*see also* Takehara, page 3, lines 20–41), where frequency timing is determined where an output voltage of the operational amplifier A1 is:

> connected to the input terminal of voltage control oscillator (VCO), controls the resonant frequency of the oscillator (VCO). Namely, as the discharge voltage increases by any cause, the output of operation amplifier A1 rises up, and then the oscillating frequency of the oscillator (VCO) also rises up. A monostable multivibrator (ONESHOT) is set at a leading time for the output of the oscillator (VCO), so the output is at a high level. A resistor R2 and a capacitor C2 are provided for determining the output pulse width of the multivibrator (ONESHOT), and the width is kept constant by the time constant.

(Takehara, page 3, lines 36–41). Like Bailly, Takehara fails to describe a **single-feedback circuit** via the two series-connected threshold value components of the present application. Instead, Takehara relies on a complex network of oscillators and multivibrators. As noted above, the components recited in amended independent claim 1 additionally allow for the addition of signal propagation times through the components to achieve the desired time delay in driving the switching transistor. The configuration recited in amended independent claim 1 provides these features without the complex circuitry and specialized parts required in Takehara. For these reasons, Takehara fails to anticipate amended independent claim 1.

For the foregoing reasons, Bailly and Takehara fail to anticipate each and every element of amended independent claim 1 and as such, rejection of independent claim 1 and its dependent claims 2–15 under 35 U.S.C. § 102(b) should be withdrawn.

With respect to the subject matter of amended independent claim 17, claim 17 recites a method for operating a converter circuit comprising, among other things:

applying a current or voltage to an input of a first threshold value component of said converter circuit, said first threshold value component having a threshold value;

outputting a first signal from the first threshold value component, said first signal corresponding to a value of the current or voltage applied to first threshold value component as a function of the threshold value;

applying the first signal to an input of a second threshold value component of said converter circuit, said second threshold value component having the threshold value and leading to a control electrode driving a switching transistor;

outputting a second signal from the second threshold value component to the control electrode driving the switching transistor, said second signal corresponding to the first signal from the first threshold value component as a function of the threshold value.

Similar to the recitations of independent claim 1, independent claim 17 describes a feedback path to and from a switching transistor via two series-connected threshold value components ("applying"..."outputting"..."applying"..."outputting... to the control electrode driving the switching transistor"). Applicants submit that amended independent claim 17 is allowable for at least the same essential reasons given above for the allowance of amended independent claim 1. As such, rejection of independent claim 17 and its dependent claim 18 under 35 U.S.C. § 102(b) should be withdrawn.

With respect to the subject matter of amended independent claim 19, claim 19 recites an illumination system comprising, among other things, an electronic ballast for a lamp, said electronic ballast including a converter circuit comprising:

a switching transistor; and

a drive circuit for driving the switching transistor which is designed to switch the switching transistor in response to a voltage or current value, wherein the drive circuit comprises **two series-connected threshold value components which respond to a respective input signal as a function of the threshold value with an output signal transition, in that an input of a first threshold value component is connected such that it can detect the voltage or current value from the output of the switching transistor, and the output of the first threshold value component drives an input of a second threshold value component, and the output of the second threshold value component drives a control electrode of the switching transistor**.

Independent claim 19 recites a drive circuit that, similar to the recitations of independent claims 1 and 17, describes a feedback path to and from a switching transistor via two series-connected threshold value components. In claim 19, the input of a first threshold value component is connected such that it can detect the voltage or current value from the output of a switching

transistor, and the output of the first threshold value component drives the input of a second threshold value component. The output of the second threshold value component, in turn, drives the control electrode of a switching transistor, forming a feedback path. Applicants submit that amended independent claim 19 is allowable for at least the same essential reasons given above for the allowance of amended independent claim 1. As such, rejection of independent claim 19 under 35 U.S.C. § 102(b) should be withdrawn.

Conclusion

Applicants submit that the claims are allowable for at least the reasons set forth herein. It is felt that a full and complete response has been made to the Office action and, as such, places the application in condition for allowance. Such allowance is hereby respectfully requested.

Although the prior art made of record and not relied upon may be considered pertinent to the disclosure, none of these references anticipates or makes obvious the recited aspects of the invention. The fact that Applicants may not have specifically traversed any particular assertion by the Office should not be construed as indicating Applicants' agreement therewith.

Applicants wish to expedite prosecution of this application. If the Examiner deems the application to not be in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the application in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency or overpayment of any required fee during the entire pendency of this application to Deposit Account No. 19-1345.

Respectfully submitted,

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